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# SCIENTIFIC CORN BREEDING

Scientific work is only of scientific interest until it can be turned to some good use by man in making a more efficient world. Corn breeding is of minor importance to the farmer until he can utilize the results of it in corn production. We are now ready to give the farmer the benefit of our corn breeding program in a larger way than ever before in the form of Hybrid Seed Corn. There is stored in our warehouse this year more Hybrid Seed Corn than was ever gathered together in one place before. No doubt it will be of interest to review briefly the development of this Super Seed Corn.

In the spring of 1916 about 1500 cars of corn varying from the extremely rough to the extremely smooth type were planted in ear rows. This experiment was the beginning of the selection of the Utility Type Corn so popular at the present time. Two methods of breeding were practiced in this plot of corn. In one case, open-pollinated seed was selected from the better rows. In the other, the superior plants in the row were inbred. Inbreeding is the process of taking the pollen from the tassel of a plant, putting it on the silks of the same plant and at the same time excluding all foreign pollen.

#### Method of Breeding

A small bag is secured over the small shoot before any silks appear. After the silks are out and the tassel is producing pollen, a larger bag is clipped on the tassel in the evening. The next morning the tassel in this bag is shaken vigorously; the bag is removed and folded in half so as to retain the pollen; the small bag on the shoot is taken off and the open half of the pollen bag quickly slipped over the shoot. Now the bag is straightened up and at the same time shaken vigorously in order to distribute the pollen over all of the silks. This bag is elipped in place and serves to protect the silks from foreign pollen, while at the same time it is large enough to accommodate the growing ear.

#### **Inbreeding Reveals Weaknesses**

The next spring, when this inbred seed is planted in ear rows, a large number of weaknesses show up, such as dwarf plants, plants with rolled leaves, individuals with weak roots and weak stalks, leaves of poor color or lacking in green material, plants which are smutted and plants having undesirable characters which are too numerous and complex to list here. Only the better rows are considered for further work and only the superior individual plants of these better rows are again inbred. After several years of such selection and inbreeding uniform appearing types develop which are known as PURE LINES. Our Pure Lines represent the selection from thousands upon thousands of ear rows of inbred corn covering a period of 12 years. These Pure Lines are not suitable for the corn producer since they yield only about one-half as much as good open-pollinated varieties.

# No Corn Is Better Than Its Roots

These Roots are Characteristic of the weak rooted and well rooted Inbred Strains shown at the right. Root development is one of the factors influencing lodging in corn. Drought injury is closely correlated with the character of the root system.



FUNK'S HYBRIDS ARE PRODUCED FROM WELL ROOTED INBRED STRAINS.

#### Single Cross Seed

When two of these Pure Lines are crossed, however, the yield lost on inbreeding is usually regained and the resulting Hybrids are extremely desirable from the standpoint of the producer. This crossing is carried out experimentally using the same methods practiced for inbreeding except that the pollen from one Pure Line is dusted on the silks of another Pure Line. A cross between two Pure Lines is known as a SINGLE CROSS. This kind of seed would probably be most satisfactory for the corn grower except for the fact that up to the present time it has been too expensive to produce in commercial quantities. Limiting factors in the economical production of Single Cross seed on a large scale are the low yield of the Pure Lines and the difficulties encountered in producing sufficient quantities of Pure Line Seed for large field plantings. Additional difficulties arise in that special planter plates are necessary for planting the small kernels from the Pure Lines which produce the vigorous, high yielding Single Cross Corn.

#### Double Cross Seed

The next best thing is to produce DOUBLE CROSS SEED by the union of two different Single Crosses having no common Pure Line Parent. It was necessary to make thousands of single crosses before a few of sufficient merit were found for use in making Double Crosses. These were combined in every possible way and the ones which gave the best results for several years over a wide range of soil and climatic conditions were produced in larger quantities for commercial seed. Funk Bros. Seed Company has had Double Cross Seed available in somewhat limited quantities for a few years as Pure Line Double Cross No. 250.

#### Production of Large Quantities of Seed

In order to produce Single Cross Corn in large quantities detasselling methods were used. Two different Pure Lines were planted in a field in alternate rows. One of them was detasselled



DETASSELING CORN TO MAKE HYBRID SEED Each field must be gone over five or six times. All the tassels are removed from the rows used for seed. Over a thousand dollars was spent detasseling corn this year.

throughout the field before any pollen had been produced. This insured that the only pollen present in this isolated plot of ground came from one Pure Line. The Single Cross seed is produced on the detasselled rows. This method produces seed on only one half the land. We have varied this method lately in order to secure seed from two-thirds of the land by planting two rows of one inbred together for detasselling and having every third row throughout the field for pollen producers. This variation gives equally good pollination and makes for more economical seed production.

#### Producing the Double Cross Seed

Double Cross seed is produced by planting two Single Crosses having no common Pure Line parent in a larger plot of ground for detasselling. Two rows of one Single Cross are detasselled throughout the field while every third row of the other Single Cross is left as a pollen producer. Double Cross Seed is picked from the detasselled Single Cross rows and it is in this Double Cross that we are able to give the producer the benefit of years of breeding and eareful plant and seed selection.

#### Quality Corn

High yield has not been the only consideration in this Corn Breeding Program. If yield had been the sole objective the problem would have been greatly simplified. It has been our demand at all times that the seed turned to the farmer produce a desirable type plant as previously described and a good ear of high quality corn. This means that it must mature early and that it must be more resistant to ear rots than the open-pollinated varieties usually grown. These standards have ruled out some exceptionally high yielding hybrids. What would it profit a man to have a big yield if it was all on the ground or of such poor quality that it would not grade at the elevator? We have long worked on the principle that there comes a time when quality is more important than yield.

# Some Hybrids Are More Desirable Than Others

Tall Hybrids	-		-	$\mathbf{Sh}$	ort Hybrids
High Ears -		-		-	Low Ears

Total Corn from 25 Hills 30 Lbs. - - - - 28 Lbs. Sound Corn

10 Lbs. - - - - 26 Lbs.

Contests, newspaper publicity and exploitation have built up a "Tall Corn" myth. It is kept alive by song and by the popular fancy of the bystander. Tall Corn is not necessarily high yielding corn. For commercial purposes we believe in the shorter, low eared, well rooted, stiff stalked Hybrids which produce a good yield of high quality corn.



Photo, Funk Farms, Nov. 16, 1928.

# Pure Line Double Cross No. 250

The reports from this cross have been very pleasing. Pure Line Double Cross No. 250 was distributed in considerable quantity last year and over a wide area. It was grown by farmers on large acreages and found to be good. If all of the reports had been 100 per cent favorable we would have been more than surprised for no corn has yet been developed which is adapted to all conditions. With varying latitude and soil it is necessary to have varieties of corn capable of producing best results under a given set of conditions. Pure Line Double Cross No. 250 is a little too early to please the producers of some localities. To these we recommend the later maturing Hybrid No. 365, for there is no doubt as to the superiority of Pure Line Double Cross No. 250 under conditions where Hybrid No. 365 is too late.

Pure Line Double Cross No. 250 bears a good ear at a convenient height on a short sturdy stalk. We have never marketed seed which produces such a high yield in proportion to the amount of stalk. Nutrients from the soil are necessary to produce grain so in the interests of economy of plant food WHY grow a larger proportion of stalk? Efficiency is the keynote of economy and lowered cost of production in industry. Corn Growers should not fail to take this opportunity to put Corn Production on a more efficient basis.

Our entire supply of Pure Line Double Cross No. 250 seed was harvested early. It was dried rapidly on our drying racks. This method is productive of highest quality seed. After drying each ear is carefully examined and only the best ears are retained. Then they are tested, shelled, graded, and treated with Improved Semesan Jr. As stated before, from the standpoint of seed corn, we have spared no pains to turn out a high quality product which is a big step toward a good erop.



 HYBRID NO. 365
 One of the better Planter Box Samples

 Row 70
 68 bu. per acre
 Row 72
 55 bu. per acre

 Hybrid No. 365 was superior in every respect to the 112 Planter Box Samples.

# Hybrid No. 365

Never before have we introduced a new strain of corn with the feeling of confidence which accompanies the offering of Hybrid No. 365. Single Cross No. 365 is the female parent of this Hybrid. Another high yielding strain was used as the pollen parent. Sturdy, low growing and vigorous, this Hybrid is further confirmation of the fact that high yield can be obtained without TALL STALKS. Hybrid corn will, no doubt, soon religate the "Tall Corn" myth to its proper status among the Nursery Rhymes. Why reach up after such a high percentage of the cars in the Fall, or stoop to pick them from a down stalk when Hybrid 365 offers you its ear at a convenient height (yard stick high). The stiff sturdy stalk and strong root system reduces the hazard of down eorn.

Hybrid 365 matures in approximately 115 days. We advise early planting and in this case more especially urge it for Hybrid No. 365 survives the cool nights of late spring and early fall much better than any we have ever offered before.

Our supply of seed was harvested early and dried properly. Before it comes to you it is carefully selected, tested, shelled, graded and, as a further insurance, it is treated with Improved Semesan Jr. Never has such care and selection been put into seed corn in order to insure a good crop of high quality corn. Our supply has never equalled the demand. Order early.

# HYBRID No. 365 vs. FARMERS' Corn

In one of our experimental plots this year we grew 112 samples of corn taken from Farmers' Planter Boxes in the field at the planting time. Each sample was planted untreated and treated with Improved Semesan Jr. but this phase will be reported later, on the page devoted to Seed Treatment. Hybrid No. 365 was planted in this plot as a check on soil uniformity. The average yield of Farmers' corn untreated was 48.8 bushels per acre. Hybrid No. 365 yielded 66.6 bushels per acre. When it is remembered that the 112 Farmers' Samples were collected from the heart of the Corn Belt within a 75-mile radius of Bloomington there can be no doubt as to the superiority of Hybrid No. 365. Planted early Hybrid No. 365

Funk's 90 Day is an Early Yellow Dent Variety originated by Mr. E. D. Funk in 1893. It is no easy matter to maintain such an early corn where the growing season approximates 120 days. Constant attention and selection are necessary. We are ever applying the most advanced methods of corn breeding in the production of this seed. You obtain the benefit of many years of scientific breeding and selection when purchasing Funk's 90 Day corn. It is unsurpassed for those who desire an early maturing corn which combines profitable yield with unusual feeding value.

Funk's 90 Day possesses the stiff stalk and vigorous root system which are so necessary to good yield. It stands up unusually well. The ears are from 7-9 inches long 6-7 inches in circumference has yielded from 15 to 25 bushels per acre more than it did in this plot which was planted late. Hybrid No. 365 is truly a super corn.

#### Sound Corn

Late planting such as was necessary in this experiment, due to the delay in collecting the 112 Farmers' Samples (May 25, 1928) is not conducive to high quality corn. The Farmers' Samples averaged 71 per cent sound corn and the Hybrid No. 365 averaged 83 per cent sound corn. On the sound corn basis the average yield of the Farmers' Samples and Hybrid No. 365 are 36.1 and 54.3 bushels per acre respectively.

# Funk's 90 Day

and have from 16-18 rows of kernels. The grain is of a bright golden color, deep, oily, and of high quality. The percentage of rotten ears is remarkably low. A small cob permits the early drying out to proceed rapidly.

Its resistance to cold in the spring makes Funk's 90 Day a very desirable variety for early planting. For growers who want an early maturing, high yielding corn to hog-down this variety is excellent. Funk's 90 Day, planted early, matures for feeding purposes by the first of September.

The quality of our seed is excellent. It germinates well, produces strong, healthy, vigorous seedlings which are important steps in securing a good crop. No mistake could be made in purchasing such a high quality product.

# Will County Favorite

To Mr. Wm. Webb, Plainfield, Illinois, belongs the credit of originating Will County Favorite. Beginning in 1900 Mr. Webb combined Golden Yellow, an early variety of corn that he had been working on since 1885 with Western Plowman and Edman's.

Western Plowman at that time was a large late yellow corn with a broad kernel but a good yielder and Edman's corn was a yellow variety, medium early, with a rather small, deep kernel. Mr. Webb spent a good deal of time in producing the present Will County Favorite to conform to the type that he considered best to meet a standard which would be especially adapted to the Northern third or half of Illinois. Will County Favorite has matured in splendid shape for us in a little less than 100 days and the product this year shows exceptional resistance to disease. It conforms to the Utility Type and has been a consistent high yielder and also prize winner in this and other states.

In 1924 Will County Favorite was certified and registered by the Illinois Crop Improvement Association, Mr. William Webb as originator and grower.



Funk Farms Photo

# Funk's Yellow Dent, Strain 176 A

This is the Original Utility Type Corn. The original strain of Yellow Dent obtained from Mr. J. L. Reid by E. D. Funk in 1902 has gone through many changes; the Utility Type dating from 1916.

Funk's Yellow Dent, Strain 176 A has proven its superiority to the older rough type corn. There is no comparison when quality and test weight are considered. This Utility Type corn has proven to be more resistant to corn diseases and to ear rots than its rougher, starchier predecessor. Seed from the same fine ears used in initiating the corn breeding program formed the foundation stock for this superior strain of open-pollinated corn.

The light golden color and rich lustre of this corn is sure to please you. The uniformity of ear and stalk are exceptional in an open-pollinated variety. The ears are 8-11 inches long, 7-8 inches in circumference and shell out 85 to 90 per cent of heavy high quality corn. Funk's Yellow Dent, Strain 176 A matures perfectly in approximately 120 days. It lends itself well to early planting. The stalks are vigorous and sturdy and rango from 8-12 feet in height. The stalks are well anchored by a well-developed root system. Such characteristics mean that this corn will not break over or blow over under conditions other varieties would. Funk's Yellow Dent, Strain 176 A has a greater resistance to lodging and stalk breaking than any open-pollinated variety we know of and there is probably a greater acreage of this corn planted in the Corn Belt than any other strain of Yellow Dent Corn.

Our seed is of excellent quality and was all produced from seed tested for Vigor and Freedom from Disease. This Strain 176 A is the best open-pollinated corn we know of anywhere and in localities where it will mature we have no doubt as to its proving satisfactory.



# Funk's No. 329

Funk's 329 Yellow Dent is an open-pollinated corn maturing in approximately 100 days. Having been developed by selection from Funk's 90 Day it has retained many desirable characters of the earlier variety including a deep oily kernel with a small cob. This variety produces a larger ear than the 90 Day but is not so large as the later maturing 176 A Strain of Funk's Yellow Dent.

Funk's 329 has proven popular as a feeding corn. There is indeed much satisfaction in feeding ears of rich lustrous yellow color which are sound and hard. One bushel of this corn well-matured is the

equal of two bushels of some later variety which is soggy and starchy even though the ears may be larger. A feeder is never pleased with chaffy corn.

The strong root system of Funk's 329 carries a stiff, vigorous stalk both of which are so vital to standing ability in corn. Farmers desiring a start of a high yielding, early variety will find that Funk's 329 fits their needs. It has yielded approximately 70 bushels per acre of sound, well-matured corn on the Funk Farms for several years. This seed was gathered early, stored in a dry warehouse where the temperature is never below 40° and is now offered for your consideration.

# **Our Experience In Corn Production**

Experiments by State and Federal agencies over a period of years has indicated that corn planted May 5 or before yields, on the average, 15 bushels per acre more than corn planted after May 25. In general the loss is one bushel per day each day after May 5. This checks with our actual experience of many years of corn growing.

It has been observed that to obtain the best results from GOOD SEED, and especially from HY-BRID SEED, that:

- 1. It should be planted early.
- 2. It should not be planted thicker than the fertility of the land warrants.
- 3. It should be cultivated sufficiently to check weed growth.
- 4. Shallow cultivation destroys the weeds.

![](_page_11_Picture_2.jpeg)

Photo Funk Farms, July 3, 1928

 SEED TREATMENT IMPROVES VIGOR, STAND AND UNIFORMITY

 Bow on Left—
 Middle Row—
 Row on Right—

 Disease Free Seed Treated
 Ordinary Seed Untreated
 Ordinary Seed Treated with Improved Semesan, Jr.

# Improved Semesan Jr.

#### **Use Dust Treatment on Your Corn**

One more year's work with seed disinfectants has strengthened our belief that Improved Semesan Jr. is the best available at the present time. Improved Semesan Jr. has again proven to be the safest, cheapest, and most effective. Best results are obtained when it is used with good seed. No seed treatment could be expected to increase the vitality of poor, low germinating seed eorn.

Last year, at eorn planting time, our salesmen collected 112 samples of eorn from Farmers' Planter Boxes. Among other things, we wanted to know how seed treatment would benefit Farmers' eorn. In order to study this effect, one row of each sample was planted as it eame from the planter box. Another row was planted from the same sample treated with Improved Semesan Jr.

#### Improved Semesan Jr. Benefits Farmers' Corn

Of the 112 Farmers' Samples, 22 yielded more than 55 bushels per aere untreated while treated with Improved Semesan Jr. 43 of them yielded more than 55 bushels per aere. Only three of the samples yielded less than 25 bushels per aere and the same three samples treated yielded less than 25 bushels per aere. These three samples were of such poor germination that the owners probably had to replant their corn. No seed treatment compound could be expected to benefit such poor seed corn. Nine of the Farmers' Samples yielded between 25 and 40 bushels per aere untreated and the yield of all but two of them was increased to over 40 bushels per aere when treated. The majority of the Farmers' Samples, 78 in all, yielded between 40 and 55 bushels per acre untreated. The average untreated yield of these 78 samples was 48.5 bushels per acre. Treated with Improved Semesan Jr. the average yield of these same 78 samples was 52.0 bushels per acre. The increase of 3.5 bushels per acre for treatment cost approximately 21/2 cents per acre. A farmer with 100 acres of corn would have been 350 bushels ahead by treating his corn with Improved Semesan Jr. and this increase would have cost but \$2.50. It is obvious that these farmers of Central Illinois would have profited greatly by using seed treatment.

#### Improved Semesan Jr. Best on Good Seed

The use of dust treatment on seed corn has been found to fit in with other good farm practices. The most consistent increases have been obtained by using Improved Semesan Jr. on GOOD SEED while on chaffy, starchy or low germinating seed no increases have been obtained. Experiments carried out this year at a number of different places in Illinois using several kinds of corn which was selected and tested by different men bring out the importance of treating all of the corn planted.

Briefly, the increase for treating well selected seed was between four and five bushels per acre. Testing gave an increase of about three and onehalf bushels per acre while both testing and treating gave an increase of approximately six bushels per acre. These figures indicate that testing or treating good seed result in about the same returns. When the seed was both tested and treated the greatest increases were obtained. Similar results could not be expected unless well selected, viable seed from a good strain of corn was used.

These experiments have demonstrated to us the very decided benefit to be gained by the Farmer from the use of Improved Semesan Jr. With the exception of a few experimental plots all of the corn planted on the Funk Farms is treated. Even corn which is tested for Vigor and Freedom from Disease is treated. This does not mean that we think seed treatment can take the place of testing but that it is merely another means by which a Farmer can improve his seed corn at a low cost. Treating seed corn with Improved Semesan Jr. is a good insurance against certain diseases, especially when unfavorable spring conditions prevail.

#### Small Grain **Ceresan** for A Dust Treatment for Oats Smut

Dr. Benjamin Koehler, Plant Pathologist of the Department of Agronomy. University of Illinois. makes the following statements regarding Ceresan in the Extension Messenger of the Agricultural Experiment Station, under date of November 7, 1928.

"A dust treatment for seed oats which promises to be considerably superior to the standard formaldehyde method of oats disease control during the past 30 years has been found after four years of research. Discovery of the new method comes as the latest scientific development in the more efficient production of a crop which this year was grown on approximately 4,100,000 acres of Illinois farm land."

"Added yields nearly twice as great as those from the standard formaldehyde treatment have been obtained with the dust treatment. The dust is an ethyl-mercury-chloride compound. The superior yields from the dust treatment are attributed to the fact that the new compound not only gave perfect smut control but also checked other diseases which beset the oat plant, such as seedling diseases caused by infection from the soil."

"Seed oats can be treated with the new dust method for a cost of only about 10 cents a bushel for materials. The compound is being manufactured by one of the commercial organizations under the trade name of CERESAN. In the experiments three ounces of the dust were used

			CER	ESAN
	Α	Dust Disin	fectant i	for Wheat, Oats, Barley
		and	Certain	Other Cereals
8-0z.	tin		\$.50	25-lb. pail\$ 12.50
1-lb.	tin			100-lb. drum 49.00
5-lb.	tin		3.00	300-lb. drum 144.01

on each bushel of grain. As in the case of all dust treatments, thorough mixing of the dust with the grain in a good homemade barrel-type mixer or commercial mixer is necessary."

"Chemical treatments for the protection of seeds of farm crops against disease long have attracted the interest of scientists, because such treatments are more convenient and fool proof than liquid treatments. Previous to the conclusion of these experiments, successful dust treatments had been available for wheat and corn, but these same treatments had failed as a remedy for oats smut."

"It has only been within the past two seasons that the ethyl-mercury-chloride compound was found. In one experiment comprising ten replications with 60 Day oats, the yield under the new dust treatment was increased an average of 14.2 bushels an acre over what it was without treatment. In another experiment involving ten replications with Big Four oats there was an average increase of 19.1 bushels an acre."

SEMESAN Jr.

	A Dust Disinfecta	nt for Seed Corn
4-oz. tin	<b>.\$</b> .50	25-lb. pail\$ 31.25
1-lb. tin	1.75	100-lb. drum 120.00
5-lb. tin	8.00	300-lb. drum 345.00

![](_page_14_Picture_4.jpeg)

Strong Sprouts—Weak Sprouts
Plenty of Roots-Few Roots
No Disease Disease
Good Seed Poor Seed
A Good Crop——A Poor Crop
Profit — Loss

![](_page_14_Picture_6.jpeg)

![](_page_14_Picture_7.jpeg)

# Use Good Seed Selected from a Good

Disease-free seed is better than diseased seed of the same strain of corn. But diseasefree seed of a poorly bred and poorly selected strain may still be very inferior seed because it will produce a crop that may fall down, break over, and rot in the field. The seed may have been viable, vigorous in germination, and even free from disease, but

![](_page_14_Picture_10.jpeg)

# **Strain of Corn**

![](_page_14_Picture_12.jpeg)

the resulting plants were not bred to send their roots deep into the soil, to produce a strong stalk, and to mature a high yield of sound corn. Poor seed is too expensive to plant. No one that expects to keep out of the "marginal" elass can afford to use poor seed corn.

LET US TEST YOUR SEED **Funk's Par-Post Disease Free Seed Corn Testing Service** SIMPLE AS A. B. C.

![](_page_14_Picture_15.jpeg)

POOR SEED

..... Address

Two cents per ear. You send the corn to us in envelopes which we furnish. Plan copyrighted 1925-Simple as A. B. C.-No

chance for mix up. Corn is our greatest cash crop. Disease cuts yield 10% to 50%. It has taken years of hard work, study and experience to qualify ourselves to serve farmers. See us, write or phone for special instructions.

Send me Funk's Par-Post Testing Information and. .... Envelopes. This service is to cost me but 2c per ear,

Corner of Mammoth Germinator and Drying Racks Name

#### SILVERMINE

Funk's Silvermine is a medium early maturing strain of Iowa Silvermine. It has a good sized stalk, stands up well and makes a better yield on thin land than some of the later maturing, ranker growing varietics. The ears are cylindrical, of medium circumference, and from 9-10 inches long. The bright, creamy white kernels are deep and broad. Funk's Silvermine is adapted to a wide range of soil and climatic conditions and is one of our more popular white varieties.

### **KRUG CORN**

Krug Corn was discovered a few years ago in Woodford County which adjoins our own county of McLean on the north.

Krug Corn is the result of many years of careful selection and combined with germination tests, eliminating the discased ears.

This corn has given such a good account of itself under a wide range of conditions and has been so well advertised that it is hardly necessary to go into further details.

The seed we are offering conforms to the true Krug type—was produced from disease free seed and the quality is extra good.

### **BLOODY BUTCHER**

Bloody Butcher is a white-capped red corn which matures in approximately 90 days. Our experience shows that it can be grown successfully anywhere in the Corn Belt.

Bloody Butcher has been grown for a long time on the Funk Farms in fields we expected to "hog down"—and gives splendid satisfaction. If you want an early corn to "hog down," Bloody Butcher will fill the bill exactly. Under average conditions we turn our hogs in on this corn about the 15th or 20th of August.

### **BOONE COUNTY WHITE**

Boone County White has a great record and many customers come back year after year for this variety. We figure about 120 days of average growing weather is required to earry this corn beyond the danger line of frost. We do not recommend farmers to grow this variety except under conditions where it is known to mature properly.

## **GOLD STANDARD LEAMING**

Funk's Gold Standard Leaming is distinctly a silage and feeding corn. The ears are medium to large in size and have a rieh golden color which is characteristic of this variety. It is the favorite of feeders and matures in 120 days.

#### BARLEY

As a money crop Barley is often superior to Oats. Oats from Illinois can not compete at the same price with those from the north and northwest. Barley has given from 5 to 25 per cent more weight of grain per acre in Illinois than Oats and Barley has a much smaller proportion of hull. Last season was the first for many years when scab proved to be a factor in the quality of the Barley crop. Don't go back on Barley because of the one bad year in so long a time.

Seed stock infected with scab should be treated with *Ceresan* to control the *seedling blight* caused by that disease. *Ceresan* also controls the Barley stripe disease.

Velvet or Barbless Barley has removed the objection to Barley on account of its beards. Barbless Barley is bearded but the beards are smooth and do not have the barbs which make beards troublesome. We have tried out Barbless Barley and found it to yield as well as the others. A good quality seed is on hand for your consideration.

#### SPRING WHEAT

We have both Dark Hard Marquis and Illinois No. 1 spring wheat for your consideration. For North Central Illinois we prefer to use Illinois No. 1 since it is more resistant to seab than Marquis. Marquis is probably superior farther north. Our seed supply of both varietics is above the average.

Sow Spring Wheat early. We have had good results seeding it as late as March and have seen good results with plantings made the first of April. Success with late planted Spring Wheat is a matter of temperature and moisture. The earlier the planting the less chance these factors have to operate against Spring Wheat success.

#### OATS

Good seed oats are scarce. The past season has been very bad for saving seed. We have a nice stock of seed on hand and will do our best to take care of your needs in this line. Don't fail to treat all of your Oats with Ceresan. We are offering the following varieties: Funk's Great American, Silvermine, Early Prolific, Iowa 103 and Iowar.

![](_page_16_Picture_2.jpeg)

![](_page_16_Picture_3.jpeg)

Inoculated Not Inoculated SWEET CLOVER

SOY BEAN ROOT, Inoculated

White Blossom Sweet Clover at Arlington, Va., showing the effect of inoculation upon their growth. The plants at the left represent the average growth on the inoculated plats; those at the right the average growth on the plats not inoculated. The plats had been previously limed and were seeded on the same date. Farmers Bulletin 797, U. S. D. A.

#### INOCULATION State Kind of Seed You Wish to Inoculate.

#### Funk Farms Brand.

#### JELLY CULTURE-NEW REDUCED PRICES

#### For Clovers and Alfalfa

1/2	bushel	size	inoculates	30	pounds	$\mathbf{of}$	seed	.35
1	bushel	size	inoculates	60	pounds	of	seed	.50
$2\frac{1}{2}$	bushel	size	inoculates	150	pounds	of	seed	1.00

#### For Soy Beans, Cow Peas, Field Peas and Vetch

1	bushel	size	inoculates	60	pounds	of	seed \$	50 .50
5	bushel	size	inoculates	300	pounds	of	seed	1.25

#### **Inoculate All Legumes Planted.**

#### McQUEEN'S MOIST OR DRY METHOD MAY BE USED New Reduced Prices For Clovers and Alfalfa

$\frac{1}{2}$	bu.	size	inoculates	30	lbs.	seed\$	.50
1	bu.	size	inoculates	60	lbs.	seed	.75
$2\frac{1}{2}$	bu.	size	inoculates	150	lbs.	seed 1.	.50

#### For Soy Beans, Cow Peas, Vetch, Peas or Beans—all large seed.

1	bu.	size	inoculates	60	lbs.	seed				.50
2	bu.	size	inoculates	120	lbs.	seed				.75
5	bu.	size	inoculates	300	lbs.	seed				1.65
G	ARI	DEN	PACKET-	-pea	s, be	ans,	lima	beans,	sweet	
	p	eas .								.20
Parcel Post Paid										

![](_page_17_Picture_2.jpeg)

Photo of Frank I. Mann's magnificent 100 acre field of Alfalfa, August, 1928. From the combined viewpoint of technical and practical experience, we consider Mr. Mann the best authority on alfalfa in the Corn Belt. This field was seeded with Utah "BEE HIVE" Pedigreed alfalfa. You will recognize Mr. Mann at the left.

#### Use Funk Farms Brand Inoculation

## ALFALFA

Use Limestone Where Needed

ALFALFA planting practices vary widely. Some farmers seed on winter wheat in February or March while others seed in the summer. Summer seeding usually gives best results on fall plowed land. Successful growers report that manure gives exceptionally good results on AL-FALFA. The standard rate of seeding is from 15 to 18 pounds per aere.

Cuttings made too early or too late are hazardous to good stands. Improper pasturage is also dangerous. Grimm Alfalfa is a little hardier than ordinary Alfalfa as a pasture erop. Grimm is used on the FUNK FARMS where it is to get hard pasture usage. For general use we have found common Alfalfa to be satisfactory. The price of Grimm practically prohibits its use in the Central Corn Belt.

#### Hardy "Bee Hive" Utah Alfalfa

"BEE HIVE" ALFALFA seed comes from the mile high plateaus of Utah. It has been there for FIFTY YEARS, isolated, uncontaminated by seed from other regions. Its weak points died out long ago in the severe winters where temperatures often reach 19 degrees below zero, or they have succumbed to the extreme summer heat of 105 degrees in the shade.

#### "Bee Hive" Alfalfa is Hardy

This seed, tracing back fifty years to the fields of A. A. HINKLEY and RICHARD COOPER, is exactly what the farmers of the Corn Belt need to combat winter killing. No foreign or mild climate seed has ever been mixed with it. "BEE HIVE" Alfalfa is hardy. The seed is produced by the back country farmers of Utah who have organized for the purpose. Their fields are inspected and their planting, harvesting, cleaning and shipping is supervised by experts.

#### "Bee Hive" Makes Good in Illinois

We have investigated the place where it is grown. We have investigated its history near the cold topped mountains of Utah. We have grown it here in Illinois and have supplied it to some of the largest farmers in the State. We have found and these farmers have found that it is highly successful.

![](_page_18_Picture_2.jpeg)

Alfalfa is to the Farmer what the Mother Lode is to the mine. Two or three cuttings of Alfalfa a season is truly a golden harvest. Farm scenes like the above always command interest and admiration.

#### Alfalfa Is a Superior Legume

As a high protein hay crop alfalfa ranks first. In the completeness of its protein compounds it seems to be superior to other legumes. In the quantity and quality of the hay it produces alfalfa has no equal. Alfalfa is especially valuable to the beef producer, the dairyman and to the poultryman, and can be used to solve many of their feeding problems. Protein feeds are the measure of their production and with no other crop can proteins be produced so cheaply as with alfalfa.

#### An Economical Protein Feed

The production of animal products on the farm, such as milk, beef, pork, eggs, etc., is probably accomplished more profitably with alfalfa than with any other feed. The tendency is for the price of mill feeds to go higher. The solution of this problem lies partly in the production of more alfalfa. Because of the high percentage of protein, the feeding quality of this protein, the large amount produced per acre and because of the value of the mineral compounds it contains, alfalfa is the real key to the economic production of animal products.

#### Alfalfa Enriches the Soil

But, the foregoing is just one-half of the alfalfa story. Alfalfa, aside from being the best legume to grow for hay, is the best of the deep rooting legumes to grow for a soil improvement crop. It is by far the best to grow when it is to be used for both purposes. In fact, alfalfa is the only legume perfectly adapted to both purposes. No other legume is as valuable as alfalfa in increasing the fertility of the subsoil. Alfalfa, in its preparation to live over winter, translocates food and fertilizer material from the tops into the roots. In order that the maximum amount of organic matter and fertilizer material be kept in the subsoil, the alfalfa should be plowed in the fall after it has made preparation for the winter.

#### **Increases Subsoil Fertility**

Mr. Frank I. Mann reports that, "Where alfalfa has been used in this way for eighteen years in rotation, (4 year rotation) analyses showed that there had been an increase of **Twenty Tons** of organic matter per acre in the subsurface soil— 7 to 20 inches in depth—and a large increase in phosphorus, sulphur and other elements." The building up of the subsoil fertility leads to greater crop yields. The hazards of dry weather are reduced. The use of alfalfa makes for a more profitable, more prosperous and more permanent system of agriculture. It pays to grow alfalfa.

# The Plea of the Soy Bean

Give me just a few of the years—Just a small amount of the patience, time and money spent in rescarch—Just a fraction of the experience gained in a hundred years of growing corn, oats and wheat.

Give me some of the opportunities you have given the crops you want to compare me with.

You have taken mc without much more acquaintance than an introduction, given me a depleted soil and asked me to restore the nitrogen and compete in cash returns with crops you have grown for years under the most scientific methods.

Again, I plead, give me just a portion of the experience you have had with other crops and I will prove my value.

Give me a succession of crops as you give corn and sec me gct stronger instead of weaker.

Give me the credit of improving soil and not depleting it.

Give me a chance to feed your stock with the highest protein feed you grow.

Give me the opportunities I plead for and you will proclaim me the farmers' best friend, Signed,

SOY BEANS

![](_page_19_Picture_12.jpeg)

The picture above shows a field of Soy Beans planted in rows with a drill and cultivated severely with a peg tooth harrow and rotary hoe. This picture shows that beans can be grown successfully this way but only under one condition and that is, that they must be cultivated thoroughly, planting a bushel to a bushel and a half of good seed to the acre.

![](_page_19_Picture_14.jpeg)

Roots of soybean plant showing abundant development of nitrogen nodules, the result of proper inoculation of seed and proper soil conditions.

## Must Inoculate for Maximum Yields

Soy Beans will yield well only when there is thorough inoculation. Only Soy Bean bacteria will do. Soil from an inoculated field where Soy Beans have recently been grown offers a satisfactory and economical means of inoculation.

Commercial cultures, such as Funk Farms Brand Inoculation can be purchased at small cost and is a very sure means of successful inoculation.

Yields increase with thorough inoculation. Inoculation increases the nitrogen in the plants, the fertilizer constituents in the roots, and the protein in the beaus.

SOY BEAN MILLS ASSURE A MARKET FOR CROPS WE OPERATE A MILL

![](_page_20_Picture_2.jpeg)

### SOY BEAN HAY

Each year the popularity of this fine high protein hay increases. It is an annual which can be used as a catch crop or substituted for some other crop in the rotation. Two to four tons of hay per acre may be expected.

Two bushels per acre, drilled solid, about the middle of May, harrowed or rotary hoed at the proper time and they are laid by till harvest. Cut after the pods are fully developed but while they are still green. Soy Bean Hay is also gaining favor as a roughage for hogs, growing pigs, young cattle and sheep. It makes an excellent winter feed for horses.

## Funk's Soy Bean Hay Mixture

Our mixture contains such varieties as Ebony, Wilson, Sable, Virginia, and sufficient early maturing yellow varieties to permit cutting while the leaves are still on and yet obtain ample grain.

### No Odds and Ends at Funk's

It has been erroneously stated by some that the only excuse for haymixture is to dispose of a job lot of odds and ends of varieties at a favorable price. This is not true at Funk's. We operate a Mill and are able to dispose of all small lots of beans, splits, cracks and inferior seed beans profitably by milling them. We are able to give you high quality plump high grade seed. Our Hay Mixture has proven itself and has been especially popular in the dairy section of the State. It is invaluable to the

man who needs a high protein roughage on short notice.

#### VARIETIES

Some of the most popular commercial varieties are:

MANCHU, A. K., MIDWEST, ITO SAN, and for hay and fertilizer: BLACK WILSON, BLACK EBONY, SABLE, VIRGINIA.

![](_page_20_Picture_14.jpeg)

SOY BEAN MILLS INSURE A MARKET FOR CROPS WE OPERATE A MILL

![](_page_21_Picture_2.jpeg)

HOLSTEIN CATTLE ON SWEET CLOVER PASTURE. ALL STOCK LEARN TO LIKE IT.

# SWEET CLOVER

#### USE FUNK FARMS BRAND INOCULATION

SWEET CLOVER is the king of all soil improvement erops. It fits into any rotation and is extremely good in a livestock rotation. Where Blue Grass keeps one eow, Sweet Clover will earry three. All stock learn to like Sweet Clover.

From 12 to 15 pounds per acre is a standard rate of seeding. Sweet Clover can be sowed broadcast as early as February. It is common practice to sow it with oats. A better stand would probably result if it was broadcast and harrowed lightly after the oats had been disced in so as not to cover the Sweet Clover too deeply. Moisture is seldom a factor in early spring planting. Sweet Clover seeds are small and lack the food reserves to send the small seedling through a deep covering of soil. It is claimed that Sweet Clover broadcast after the corn is laid

### Grundy County Sweet Clover

Grundy County Sweet Clover is an earlier maturing, smaller type, heavier seeding strain of the White Blossom Sweet Clover developed in Grundy County, Illinois. It is extremely winter hardy. Grundy County Sweet Clover makes an excellent hay since it sends out fine leafy branches which are relished and readily eaten by all

#### livestock. Grundy County Sweet Clover has been used mixed with the later maturing white blossom strain in order to provide an early pasture. It is a fine combination of soil builder, hay and pasture erop. We recommend seeding at the rate of 12 to 15 pounds per acre.

#### HUBAM SWEET CLOVER

Hubam Sweet Clover is an annual, and on well limed fertile land will make a very satisfactory growth and can be sown in the spring like any other elover and seed harvested the same season. The earliness which the plant begins to bloom after seeding compared with the long season which it will remain in bloom makes it very desirable as a bee pasture and bee keepers are enthusiastic about it. It is claimed that Hubam produces more honey than any other clover known and is of excellent flavor and quality.

USE LIMESTONE WHERE NEEDED

by has considerably more than an equal chance of resulting in a good stand. Moisture is a big factor in this method of planting. The rotary hoe and corrugated roller are useful tools for covering Sweet Clover since they are less apt to cover too deeply.

Sweet Clover sowed in the small grain and plowed under in the spring makes it the best green manuring crop of all the legumes. Properly inoculated it has been found to fix three to four times more nitrogen than red clover. The deep rooting habit is a strong point in its favor. The roots go down and absorb plant food from lower levels than do most crops. This plant food is translocated into the above ground parts of the plant. Later these plants are plowed under into the surface soil where the shallower rooted plants can make use of the plant food otherwise not available to them.

## Red Clover Use Funk Farms Brand Inoculation

The use of high quality seed always pays best in the long run. Red Clover has always been popular with the Corn Belt Farmer as a hay, pasture and soil improvement crop. A legume should always be a part of a good crop rotation and Red Clover has filled that need for a longer time than any other legume. There should be a larger acreage of Red Clover planted. It is not so exacting in its needs for lime as alfalfa and sweet clover and it can be readily worked into any rotation. The first cutting makes a fine grade of hay which finds a ready use on most farms. The second cutting can be made early and used for hay if the hay crop is short. It may be satisfactory for a seed crop or it can be plowed under and used as a green manure.

Red Clover deserves a larger acreage than has been allotted it in the past few years. Only 7 to 9 pounds of seed are required per acre. No doubt many poor stands and failures of recent years have been due to soil acidity. Our soils are constantly being depleted of lime and becoming more acid. Much land that grew a crop of Red Clover in the past has had a large amount of lime leached from it until at the present time it is not a favorable soil for Red Clover. Proper inoculation is an aid in securing a good stand of Red Clover. It is too often taken for granted that there is inoculation in the soil for Red Clover and at the small cost for inoculating the seed this assumption may prove very costly. Inoculate all legumes planted and remove this factor in securing a good stand.

### Alsike Clover Use Funk Farms Brand Inoculation

Alsike Clover will grow on slightly acid soil and for that reason many farmers mix alsike with their alfalfa and red clover. Alsike will catch on many sour or poorly drained spots in the field and thus make for a more efficient land utilization. Alsike makes an excellent pasture crop and has the added advantage of being a perennial crop which can be left down for several years. Alsike Clover is an especially fine hay crop and finds a place in many hay and pasture mixtures. It is a good legume to grow with Timothy. In dry years Alsike does not do as well as Red Clover but it is much more satisfactory than Red Clover on wet, poorly drained or bottom land.

### Mammoth Clover Use Funk Farms Brand Inoculation

Mammoth Clover is similar to red clover both in appearance of seed and in habit of growth. It is later maturing and grows larger than red clover and for that reason is superior for a soil improvement crop. It is well adapted to use on thin soils. Mammoth Clover is a good variety to seed with Timothy since both mature at about the same time. Sow 8 to 10 pounds per acre by itself or 6 pounds of Mammoth Clover and 8 pounds of Timothy per acre makes a good mixture.

### Woods Clover [Dalea] A Legume for Thin Sour Land

Woods Clover is an annual legume which will grow on thin, sour or sandy land. It does not prove satisfactory on more fertile soils. In case Alfalfa or Sweet Clover will grow and do well use them. Woods Clover is for land which will not grow Alfalfa, Sweet Clover, or Red Clover and it is on this type of soil that Woods Clover seems to thrive. Reports from Iowa, of fourteen tons of green material per acre, indicate that this legume is an excellent green manure crop.

Woods Clover is an abundant seed producer. Iowa growers report from eight to twenty-three bushels of seed per acre. The crop is seeded in small grain in exactly the same manner as other clovers. About 12 pounds of seed should be used per acre. It is not advisable to seed too early in the spring since this legume is somewhat of a warm weather erop.

Woods Clover should be inoculated before seeding as is the case with all legumes. Commercial Cultures specially prepared for Woods Clover or Dalea should be used. Inoculation for no other legume will inoculate Woods Clover. Woods Clover is in a class by itself. Unless legumes are inoculated they are of little benefit to the land. In fact, it is claimed that uninoculated legumes are soil robbers.

#### Rape

Genuine Broad Leaved Holland Grown Dwarf Essex Rape is the best and will produce the most feed. Try some of our Holland rape this year and you will not be disappointed.

Rape seeded with oats provides summer pasture in place of foul weeds. Rape is good for hogs, sheep, eattle, ealves and horses. Rape may be grown alone or with small grain or between eorn rows at last eultivation.

#### **Red Top**

This is one of the best grasses we know of to seed poorly drained land. It makes good pasture and as the price is very reasonable this year, suggest that you try it out on your low spots. You will be surprised how it will eatch, and what it will produce on land which you may now consider practically worthless. Be sure and order a few pounds this year and give it a trial.

#### **Millet**

It is easy to obtain a good stand of Millet either by using a grain drill or broadcasting at the rate of 30 to 40 pounds of seed per acre. German or Golden Millet produces a larger yield of hay and we recommend these varieties for average Corn Belt conditions.

#### Timothy

We have exceptional stock of home grown timothy this year. It is bright, plump, high germinating and price is right. Timothy is easily established and does especially well with red elover or alsike.

#### Kentucky Blue Grass

Kentucky Blue Grass has three main uses in the Corn Belt. First—as a pasture mixture it occupies a very strong position. Seeond—it is the basis for all lawn grass mixtures. Third—as a grass for establishing a permanent sod along the highways it has no equal.

Seed this year is moderate in price, quality is excellent and now would be a favorable time to place your order.

#### Hay and Pasture Mixtures

There is a real place on most farms for a hay and pasture mixture. Where several different hay plants are grown together the tonnage of hay is often increased and, too, it is possible to combine the good points of more than one plant in this manner. That small lot would make an excellent place for our hay and pasture mixture.

We will be glad to make recommendations for mixtures for special uses and for use under conditions which are out of the ordinary.

#### Funk Farms Mineral Mixture

HAS proven its value in the feed lots on the Funk Farms.

CONTAINS Spent Bone Black--Calcium Carbonate-Kiln Dried Salt--in the proportions outlined by the Iowa Experiment Station. Cost is small compared to gain. It's a money maker fed to hogs. Prieed at \$2.50 per hundred pounds.

#### **Hog Pastures**

Rape seeded with oats makes a superior summer hog pasture and takes the place of weeds in the hog lot. Sudan Grass is excellent for a later hog pasture. A field divided into smaller lots would make for better utilization of these erops for hogging. Best results are obtained when the hogs are not turned on the pasture too early. That barren hog lot seeded to one of these erops or mixtures will make a fine place to earry the hogs over till the eorn is ready to hog-down in the fall. The sanitation advantages are obvious.

#### Sudan Grass

Sudan Grass belongs to the Sorghum family. It was secured from Khartum, Sudan, in 1909. It seems to be adapted to any soil and most elimates. It will produce two cuttings of hay the same year and under eertain conditions may be cut the third time. The yield averages three to five tons per acre and stock eat it in preference to almost any other kind of hay. It is a success for a pasture crop. It makes a sure summer pasture within thirty days. Best growth is secured in hot dry weather when other pastures fail.

![](_page_24_Picture_0.jpeg)

Photo of Frank I. Mann's magnificent 100 acre field of Alfalfa, August 1928. From the combined viewpoint of technical and practical experience we consider Mr. Mann the best authority on Alfalfa in the Corn Belt. This field was seeded with Utah "BEE HIVE" Pedigreed Alfalfa.

Cultivated

By a group of over 2200 farmers. Under a unique contract system. With organized expert supervision. The fields are selected and weeded. The seed harvested, again selected, then recleaned, refined and tested by the latest improved methods.

The Alfalfa seed which comes to you under the Bee Hive Brand is the result of supervised production under organized direction. The fields are the result of seeding and reseeding from the first local production since the time before the Spanish-American War. The system of contract production, harvesting methods, seed cleaning and testing, absolute native pedigree and other details are things that only this organized effort can insure.

This system of contract production of Alfalfa seed is distinctly novel in the field seed industry. Although in general it is practiced in the garden and flower seed trade, nothing quite like it is practiced in common in the field seed industry. THE RESULT IS THE PRODUCTION OF BEE HIVE—The Cream of THE UTAH

THE RESULT IS THE PRODUCTION OF BEE HIVE—The Cream of THE UTAH CROP—the best, proven seed of its strain on the market, with a known history of thirty years behind it.

Sacked In Sealed Bags To facilitate sale by the dealer And for the protection of the buyer.

#### **A Premium Seed**

The hardiness of Bee Hive is field-bred through years of adverse climatic conditions.

The quality of Bee Hive is field-developed by the organized co-operative effort of over 2200 farmers.

The qualities of Bee Hive are grown in it. It is more than merely Factory dressed seed.

#### **Proven by Test**

Extracts from original official correspondence on file:

"This spring we decided to purchase additional carloads of this same Utah seed to supply planters where unfortunately other varieties and Southwestern Alfalfa had not withstood the freezing—Reports are already coming in, indicating the pleasure of the farmers and planters have in the result of this seed distribution."

"Nine men picked Bee Hive for Grimm-All expressed themselves as being in favor of Bee Hive from the results of this demonstration."

"I am personally a strong believer in Bee Hive Alfalfa seed as we have conducted some very good demonstrations in the county, along with the best Grimm we could buy. I recommend it in preference to Grimm."

"About ten different fields were visited and the consensus of opinion seemed to be that there was very little, if any, difference between Dakota 12, Utah and Grimm Alfalfa as to resistance to heavy winter killing, condition of growth and stand."

"I have examined the field three or four times and can find practically no appreciable difference in the growth and development of the different varieties. Found it in splendid condition at this time when so many Alfalfa fields have frozen out. This was a variety test with the use of Grimm, Dakota 12 and Bee Hive Alfalfa seed."

"Utah Alfalfa at the Michigan Experiment Station has yielded an average of 3.98 tons per acre for six consecutive years."

"Michigan with 600,000 acres has the largest Alfalfa acreage of any state east of Kansas and Nebraska. The majority of Michigan's Alfalfa acreage was sown with Utah seed."

# FUNK BROS. SEED CO. Bloomington, Illinois

![](_page_25_Picture_0.jpeg)

Where Winter stays late and Fall Freezes come early. Where the growing season is the shortest of any area in the United States.

W HEN you were a boy did you ever go out and climb to the top of a windmill in January when it was 10° (degrees) above zero on the ground? Didn't you notice how much colder it was at the top of the windmill?

Well, how would you like to climb up a mountainside until you were, not 30 ft., nor 300 ft., but 4,500 to 5,500 ft., where the minimum temperature is from 10 degrees to 20 degrees below zero instead of above?

The higher you go in the air, the lower the mercury goes in the thermometer. SEVERE CLIMATIC CONDITIONS DEVELOP WINTER HARDY PLANTS.

# **Produced from 30-Year-Old Fields**

From plants that have survived severe winter conditions year after year for thirty plant generations, subject to the hazards of icy mountain WINTERS. NATURAL SELECTION.

Resisting temperatures of from 20° to 30° (degrees) below zero with scanty snow protection and the even more damaging spring freezes and thaws. RESISTANCE.

The survival of the fittest—with a longer natural pedigree than any other domestic origin. PEDIGREE.

It can be readily seen that Bee Hive seed is produced from sturdy stock, the hardy long living plants that have gone through annual survival of the fittest periods for thirty years. Plant life that can survive through thirty years of hardship proves itself. What weaklings there might have been have eliminated themselves without man's help years ago. It is just as if you had a crew of men at work constantly in your fields for thirty years, pulling up, throwing out—eliminating the weak plants—leaving only the strong, virile ones--so ONLY THE FITTEST HAVE SURVIVED.

![](_page_25_Picture_10.jpeg)

#### **Funk Farms Inoculation**

For Clover or Alfalfa, 1 bu. size, 50c For Soy Beans, Cow Peas, Vetch, etc., 5 bu. size, \$1.25 State kind of seed you wish to inoculate.

### **McQueen's Inoculation**

State kind of seed you wish to inoculate.

For Clover and Alfalfa, 1 bu. size, 75c For Soy Beans, Cow Peas, Vetch, etc., 5 bu. size, \$1.65 See catalogue, page 15 for detailed price list.

Bushels at......\$

# Funks Special \$2.00 Seed Corn Offer

Satisfaction Guaranteed

FOUR STRAINS-ENOUGH TO PLANT ONE-EIGHTH ACRE OF EACH. INCLUDES AT LEAST TWO OF FUNKS FAMOUS HYBRIDS. \$2.00 FOR THE LOT POSTPAID. CHECK WITH ORDER. YELLOW. DISEASE FREE. TREATED.

Every farmer should place an order. Try out Funks Famous Hybrid strains of corn. Plant them early, watch them grow. Cold resistance, vigor, high yields, combined with quality, have been bred into these new products of science. They are the latest word to date, quality and yield considered. We have unlimited faith in their performance if planted on land capable of producing corn at a profit. Which strain is best adapted to your farm can only be determined by test.

Place your order early—compare these strains with the other corn on your farm. Plant it where you can watch it grow, where your friends can see it, where the boys can see it from the time it peeps out of the ground until it is ready to harvest. Treat it right and if you tell us next fall it was not one of the most interesting experiments as well as one of the best investments you ever made your purchase price will be cheerfully refunded.

The Sample Package will contain at least two Hybrids selected to suit conditions in your locality. Satisfy yourself as to the superiority of Hybrid corn by growing it yourself. The cost is negligible. We have produced more of this corn this year than ever before. The demand has always exceeded the supply. Only a limited amount is available for use in the Sample Package.

Funk's originated the Utility Type corn so widely grown at the present time. There is no question as to the superiority of Utility Type Corn. Use these open-pollinated varieties to put some new corn blood into your best cash crop.

#### ORDER YOUR PACKAGE TODAY BEFORE THE SUPPLY IS EXHAUSTED

Improved Semesan Jr. Dust Disinfectent for Corp 1 lb. treats 8 bushels.	Ceresan For Oats, Wheat, Barley and Rye Oats and Barley use 3 oz. per bu. Wheat and Rye use 2 oz. per bu. 1 lb. tins, 75c. 5 lb. tins, \$3.00.
1 lb. tin \$1.75	
lbs. at \$1.75 per 15. \$	\$3.00 tinz \$

Dr. Wilson's Dust and Spray Masks. Protects the nose, mouth, throat and lungs.

Masks at \$2.25 each, \$\_\_\_\_\_

A Go	od l	Place	e to Buy Seed									
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CASH WITH C	CASH WITH ORDER or C.O.D. with Inspection allowed											
February 20, 1929 — Prices subject important market changes —												
FUNK BROS. SEED CO., Bloomington, Ill.	OR	DER	BLANK Date193	2								
Enclosed findfo	r \$		for which ship me goods matked on this order blank:									
Remittances may be	made by	check, P.	O. order, express money order									
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It is mutually agreed and understood that any seeds ordere for these will be refunded, but we do not, and earnet,	d of us m in any wa	ay be rotu	med at any time within ten days after receipt if not satisfactory and money pai the crop, as it is dependent user so many conditions beyond our control.	5i.								
Bus. Bars Included Gross for Net Weight	Price	Amt	Bus. Bags Included Gross for Net Weight Price	Amt								
Unless otherwise specified	per bu.		Uniers etherwise specified per bu.	allis.								
SEED CORN			ALFALFA									
FUNES HYDRID CORN (Sold only tested, shelled and treated.)			"Bee Hive" Iteh Pedigreed Alfelfa Comes in									
Funks Pure Line Double Cross No. 250	\$15.00		original one bushel sealed bags, U. S. Gov't.									
Funks Hybrid No. 365	15.00		Northwestern, Funk Farms Brand									
OPEN-POLLINATED VARIENTES			Montana Sealed Grimm									
Average Germination 95 to 98% East Corn 50 cents per bushel higher												
Funks Yellow Dent, 176 A	5.00		Blackfoot Grimm									
Funks 329 New 100 Day	5.00		Ask for special prices on 10 bu. or over.									
Funks 90 Day Yellow	5.00		SOY BEANS									
Funks Gold Standard Learning	5.00		Funks Hay Mixture. 2.20									
Golden King-Yellow Dent, 100 to 110 Day	5.00		Eyebrow, Ebony, Wilson, Virginia, Sable									
Will County Favorite 90 to 100 Day Yellow Dent	5.00		Ask for prices									
Funks Bloody Buteher	5.00		DATS									
The above varieties Tested for Vigor and Free	- 10.00		LATEA BRIGHT-RECLEANED									
dom from Diserie	. 10.00		Great American									
Funks Silage Corn	<b>2.</b> 50		Early Prolifie									
Ask for special prices on 10 bushels or over.			Special prices 100 bushels or over									
CLOVER			SPRING WHEAT									
IF YOU DESIRE HIGHEST GRADE OBTAINABLE ABE FOR FUNES FARM BRAND			GOOD HEAVY RECLEANED SEED									
WE DO NOT HANDLE FOREIGN CLOVER SEED	D. L.		1 to 15 bushels\$1.95 per bu.									
Red Clover Funk Farms Brand	Per bu. 22.00		16 to 30 bushels\$1.90 per bu									
Good Value	. 21.00		35 bushels and up									
Mammoth Clover	. 22.00		PADIFY									
Alsike Clover Funk Farms Brand	. 22.50	)	Velvet Barbless									
Good Value	. 21.50	)	Wisconsin Pedigreed Ask for prices									
White Blossom Sweet Clover	6.50		MISCELLANEOUS									
Good Value 32e each	. 6.00	)	SUDAN GRASS									
Grundy County Sweet Clover			Orchard Grass									
Funk Farms Brand (2½ bu. bags)	. 6.00	)	Timothy. (236 bu bags 32c each) \$3.25 per bushel									
White Clover (small)	¢ per lb	•	Kentucky Blue Grass									
Hubam Sweet Clover	. 16.50	)	Lawn Grass Mixture									
Ask for special prices on 10 bushels or over.	. 0.00		SEED CORN NUBBERS \$1.25 Each									
	•	1										

READ OTHER SIDE READ OTHER SIDE IF YOU DELAY ORDERING, WRITE FOR LATER PRICE LIST.

# Funk's Field and Road Drain

# Quick Removal of Surface Water In All Seasons

This drain provides for the immediate removal of surface waters from fields and roads. For years it has demonstrated its efficiency on the Funk Farms in McLean County, Illinois.

The advantage of the Drain is that it diverts all surface water directly into the tile. It prevents the formation of mud holes in roads and puts the low places in the field in shape to be worked with the rest of the land. The surface drainage from early summer rains is quickly moved into the tile without the crop loss due to scalding and drowning out. The winter killing hazard in low places is lessened by the immediate removal of water from fall rains and melting snow. There is no delay in seeding or cultivation at any season and no necessity for mudding in the crop.

The Drain is connected directly with the tiling in any field or road by one man in an hour's time. It is adjustable to any depth tile and is easily readjusted after it is once set. Made of cast iron it lasts for 35 or 40 years. Patents cover non-clogging, non-freezing and other essential features.

Funk's Field and Road Drain pays for itself in one season by insuring crops on land that would otherwise be unproductive. It insures flushing of the tile and materially increases its capacity. Located behind a dam it has been effective in stopping soil erosion.

#### Write for Prices and Literature

![](_page_28_Picture_9.jpeg)

![](_page_28_Picture_10.jpeg)

# Funk's Improved Nubber \$1.25 · · · Each

For Butting and Tipping the Ears

![](_page_28_Picture_13.jpeg)

![](_page_29_Picture_0.jpeg)

# FUNK'S SPECIAL \$2.00 SEED CORN OFFER

Satisfaction Guaranteed

FOUR STRAINS—ENOUGH TO PLANT ONE-EIGHTH ACRE OF EACH. INCLUDES AT LEAST TWO OF FUNKS FAMOUS HY-BRIDS. \$2.00 FOR THE LOT POSTPAID. CHECK WITH ORDER. YELLOW. DISEASE FREE. TREATED.

Every farmer should place an order. Try out Funk's Famous Hybrid strains of corn. Plant them early, watch them grow. Cold resistance, vigor, high yields, combined with quality, have been bred into these new products of science. They are the latest word to date, quality and yield considered. We have unlimited faith in their performance if planted on land capable of producing corn at a profit. Which strain is best adapted to your farm can only be determined by test.

Place your order early—compare these strains with the other corn on your farm. Plant it where you can watch it grow, where your friends can see it, where the boys can see it from the time it peeps out of the ground until it is ready to harvest. Treat it right and if you tell us next fall it was not one of the most interesting experiments as well as one of the best investments you ever made your purchase price will be cheerfully refunded.

The Sample Package will contain at least two Hybrids selected to suit conditions in your locality. Satisfy yourself as to the superiority of Hybrid corn by growing it yourself. The cost is negligible. We have produced more of this corn this year than ever before. The demand has always exceeded the supply. Only a limited amount is available for use in the Sample Package.

Funk's originated the Utility Type corn so widely grown at the present time. There is no question as to the superiority of Utility Type Corn. Use these openpollinated varieties to put some new corn blood into your best cash crop.

Order Your Package Today Before the Supply Is Exhausted